

ANNEX C

PRECIS OF SOVIET OBJECTIVES AND ACTIVITIES IN ANTARCTICA

1959

Basic Soviet Objective

49. The chief Soviet interests in Antarctica are (1) to gain basic scientific knowledge (including that of military value) as a part of investigations on the earth as a whole from its core to outer space, and (2) to demonstrate concurrently by its achievements the alleged superiority of the Communist system. Antarctic research is an integral part of expanding Soviet research ... including the earth sciences, whose primary objective is "to make man the true master of nature in communist society" (Academician Igor Kurchatov). Even the conquest of cosmic space is described as "neither the sole objective nor the fruit of 'pure' science divorced from the requirements of life. It is the next logical stage in the conquest of nature by man" (Major General G. I. Polkovskiy). Such mastery is to be achieved by (1) a search for features and characteristics of nature that can be developed to the advantage of man, and (2) development of methods to cope with adverse and unpredictable phenomena of nature. Achievement of this goal requires an ever-increasing inflow of scientific data for the world as a whole ... of which the Antarctic is a particularly important area ... into the many large and competent Soviet institutes for earth-science research that have been established over the years.

Summary of Soviet Activities

50. The shift in Antarctic research from the IGY to the SCAR programs did not materially affect the topical scope of Soviet activities.

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because the Soviet program has been comprehensive, from the very first, encompassing not only the studies of the upper atmosphere, geophysics, glaciology, and oceanography under the IGY but also additional projects in mapping, geology, geography, and resources of the Antarctic. Operations facilities in 1958-59 and again in 1959-60 included two ships; some increase has been made in traverse equipment, but a slight overall reduction from previous seasons has been made in the number of winter personnel (to 112 in 1958-59 and about 120 in 1959-60). In addition to the previously conducted geophysical and glaciological studies and satellite tracking, Soviet activities during the past year involved (1) an extension of activities into new areas along with new stations, increasing emphasis on airborne teams and temporary stations, and the closing of a few of the previously established stations; (2) an expansion of activity in geologic and aeromagnetic surveying, geodesy, gravimetry, and mapping; (3) an increase in whaling activities; (4) a continuation of propaganda emphasizing the unique character, outstanding quality, and magnitude of the Soviet contribution to Antarctic research; (5) the stimulation of international cooperation and research programs to increase the volume and coverage of scientific data; and (6) an increase in participation of Bloc scientists.

51. At the next SCAR meeting in August the USSR is expected to initiate a proposal for an international geological survey and mapping program to be completed by 1968. The USSR will offer to survey and map one-half of the rock-outcrop areas in Antarctica. Preliminary information

on 1960-61 plans indicates (1) a buildup of Lazaryev station, (2) the establishment of new intermediate bases for air and land expeditions, (3) the introduction of a heavy turbo-prop jet aircraft, (4) a broadened coverage of geologic and other types of surveys, and (5) oceanographic research in the southernmost portions of the Indian Ocean. References to the planned use of the nuclear icebreaker Lenin, in Antarctica continue, but no date has as yet been announced. Approval by the Soviet Academy of Sciences of the "general direction of work on the Antarctic for 1959-1965" reconfirms the long-range interest of the USSR in Antarctica.

Stations

52. Two new stations were established in 1958-59, one the year-round station of Lazaryev, in Queen Maud Land, and the other a seasonal station called the "Pole of Inaccessibility", 885 miles inland from Mirnyy. At the latter, observations were conducted for 12 days, and the huts along with instrumentation and provisions were mothballed for use by the planned Trans-Antarctic traverse of September 1959. The Pionerskaya and Sovetskaya stations were also mothballed, whereas Komsomol'skaya was converted into a small summer station. Oasis was transferred to Poland and was renamed Dobrowolski. After occupying the station for only a week in January 1959, the Poles failed to return for the 1959-60 season owing to lack of funds.

53. For the 1959-60 season, Mirnyy and Vostok are continuing their functions without significant change. Work at Lazaryev was augmented by the addition of new buildings, tractors, three aircraft, and a Geologic-Geographic Detachment. The detachment will engage in an

intensive program of geologic, aeromagnetic, and topographic surveying in the mountains southeast and southwest of Lazaryev, and in 1960 Lazaryev will serve as the research base for the study of the icecap between the station and the Pole of Inaccessibility. A summer field base has also been established in the mountains about 90 miles further south for the support of survey operations. Another temporary research station was set up on the West Ice Shelf 125 miles west of Mirnyy for glaciological and meteorological studies (in which the American scientist, Gilbert Dewart, participated).

54. In 1960-61 Lazaryev will be converted into a long-term scientific and supply base by shifting it 60 to 90 miles southward to a rock site. Earlier reports indicate that it may eventually be enlarged to include a 25-man staff. An undisclosed number of intermediate bases for future air and land expeditions are planned for the area outlined by Mirnyy, Vostok, and Lazaryev. Air transport between stations is being expanded. Three trans-Antarctic flights between Mirnyy and Lazaryev have already been made, one of them a non-stop flight on an IL-14. During the current season, fuel for future use has been delivered to the Belgian, Japanese, and Australian stations.

Traverses and Airborne Field Research

55. In the 1958-59 season, three traverses were undertaken -- one to supply Vostok, another to set up the Pole of Inaccessibility station, and a third to deliver the special snow cruisers and sledges for the highly publicized transcontinental traverse of September 1959. A fourth -- and probably the most important although least publicized -- was

the first stage of a geophysical traverse, which was begun in 1958-59 and will for the first time provide highly precise, uninterrupted gravimetric and geodetic observations between Mirnyy and Vostok. This significant project will (1) contribute data to the Soviet world geodetic datum, which ultimately will improve target positioning for guided missiles, and (2) provide accurate relative positions for Mirnyy and Vostok, which will be valuable for improved satellite tracking and possible other types of space research. The traverse was resumed in September 1959, and this second phase reached Komsomol'skaya early in January 1960.

56. The highly publicized trans-Antarctic traverse, which left Mirnyy 27 September 1959, was cut short when the party returned to Vostok after reaching the US station at the South Pole. Fuel and supplies are now being delivered to Komsomol'skaya for the resumption of the traverse late in 1960. In the meantime an exploratory traverse from Lazaryev, originally described as headed for the Pole of Inaccessibility, began 22 January 1960 but terminated on 13 February 1960, after having traveled less than 70 miles across two badly crevassed regions. To increase the area covered by field observations beyond the limits of the traverses, the Soviets have undertaken flights by research teams to an undisclosed number of points. In addition to those associated with the surveying of the Queen Maud Land mountains and on the West Ice Shelf, landings are known to have been made at Bunger Hills and Drygalski Island.

57. Soviet air capabilities were increased for the 1959-60 season by the addition of 5 aircraft, including an IL-14 (an improved version of the Convair-type twin-engine IL-12, which has not proved completely

satisfactory for Antarctic operations) and the AN-6, a supercharged single-engine biplane with higher ceiling and range characteristics than the AN-2. The USSR also plans to introduce a heavy turbo-jet aircraft for its expanding air operations.

Surveying and Mapping

58. By 1960, the Soviets -- utilizing the extensive coastal-zone aerial surveys of the past four seasons between 45° E and 166° E and the 68 control points to which they are tied -- had compiled seven map sheets at 1:1,000,000 covering the area between 74° and 114° E and between 64° and 72° S, twenty-three sheets at 1:100,000, eight sheets at 1:50,000, and fourteen hydrographic charts, nine of which are at 1:500,000. Geological surveying, which in the first three seasons included activities at 36 points between 57° E and 165° E, has resulted to date in the compilation of maps of the Mirnyy area, Bunger Hills (Oasis), and Obruchev Hills. An intensive mapping program is being undertaken in the Queen Maud Land Mountains. A geological survey has already covered a large area between 0° and 15° E, and aerial-photo and aeromagnetic surveys extend to about 20° E.

59. Other surveys planned for 1960 and later include an extensive aeromagnetic survey of eastern Antarctica and the extension of geological and glaciological surveys, using airlift to supplement the linear coverage now limited to the routes of tractor traverses. Data from all these surveys -- hydrographic, geodetic, gravimetric, magnetic, geologic, and glaciological -- are of use not only for their designed purpose but also for map compilation.

60. The Soviets intend to propose to SCAR the joint compilation of a geological map on Antarctica at 1:5,000,000. If close cooperation is achieved, they foresee completion of the project by 1968. For their part the Soviets plan to conduct geological surveys of 300,000 square kilometers of ice-free area, or about one-half of the total. Such a map would be a major contribution to the Soviet goal of preparing a geological map of the world. That this interest in geological surveying is also related to Soviet resources exploration is indicated by a recent Soviet article stating that coal seams have already been found in large areas of Antarctica, but their magnitude -- believed to be enormous -- is uncertain.

Oceanography

61. Early in 1959 the Ob was diverted from the originally planned survey of Bellingshausen Sea to set up the Lazarev station. Scientific operations of the Ob were limited to continuous echo soundings along the 2,680-mile route from Mirnyy to Lazarev, radar mapping of the ice along a 30-mile zone, and a repeat of the survey northward along the 20th meridian to South Africa. An improvised and previously unpublicized substitute cruise to the Amundsen-Bellingshausen Seas area was undertaken by the Slava whaling fleet, consisting of about two dozen ships. Ships and helicopters of the fleet were used for ice reconnaissance and a scientific ship for the continuation of studies in oceanography, meteorology, and biology. In addition to disproving the existence of Swains and Macy's Islands, the Slava reconnoitered the area of Peter I Island for the 1960 scientific cruise of the Ob. In mid-March 1960, the Ob arrived at Peter I Island and completed a comprehensive survey -- hydrographic, topographic, and oceanographic. Soviet findings emphasize the inaccuracy of the earlier Norwegian surveys and maps.

Whaling

62. A new whaling fleet, the Sovetskaya Ukraina, joined the Slava fleet for the fourteenth Soviet whaling season. The new fleet has two ships engaged in biologic, meteorological, and hydrologic research. The whaling fleets are claimed to have provided new scientific data on the Antarctic and to have conducted hydrographic research on a number of little-studied islands [including the naming of new geographical features]. Two additional fleets are currently under construction.

Sino-Soviet Bloc Participation

63. In addition to the Poles, who were given the Soviet station Oasis (renamed Dobrowolski) in January 1959, a Czech astronomer participated actively in Soviet operations as a scientist, a navigator in continental air and land operations, and as a geodesist in the first reconnaissance survey of the mountains in Queen Maud Land in the 1959-60 season. Two Czechs and three East German scientists are now taking active part in the Soviet continental expedition. The Poles, however, failed to return to their Dobrowolski station for the 1959-60 season, as originally planned. Keen interest was displayed by CHICOM scientists in plans to participate in Antarctic activity along with the Soviets; but, after having obtained permission to do so, none embarked with the Soviets.

Political Overtones

64. Soviet propaganda, both foreign and domestic, continues to play up the unique character and outstanding quality and magnitude of Soviet achievements in the following ways:

- a. Stressing Soviet activities in areas previously unseen or untraversed by man.

b. Asserting that Soviet scientists are "in the first ranks in the study of Antarctica" and have thus overcome doubts of foreign scientists -- claiming, for example, that Soviet scientists are compilers of the first reliable maps and charts of one-third of the Antarctic Coast, the first to make wide use of tractor-sledge trains, the first to delineate climatic zones in eastern Antarctica, and the first to use rockets for temperature and pressure soundings in the stratosphere of eastern Antarctica.

c. Disproving previously reported discoveries -- citing, for example, the nonexistence of mountains in the American Highland shown on the US IGY map and also some half dozen other features listed in the US Antarctic Gazetteer.

In one case, US hospitality to the Soviet traverse party at the South Pole was even countered by a promise of a similar Soviet reception for US scientists on the moon. A permanent record of Soviet activity is provided by 242 Soviet names given to newly identified geographic features not only on land or under the sea but also under the ice. These appear both on Soviet maps and charts and in a new 867-name Soviet gazetteer of US and Soviet place names in the Antarctic.

65. Soviet commentaries after the signing of the Antarctic Treaty in 1959, indicate unreserved satisfaction with its substance. In addition, the signing of the treaty is being used in the Soviet propaganda campaign for peace and disarmament. No acknowledgement whatsoever is made of US initiative, not even of the US note of invitation to the Antarctic Conference. The initiation of the Conference is attributed to an abstract

need arising out of the successes of the IGY program and its continuation under SCAR, for which strengthened freedom of research, wider cooperation, and freedom from tensions were required. Soviet participation is represented to be derived logically from (1) the Russian discovery of Antarctica, (2) the protest against the Norwegian claim to Peter I Island in 1939, (3) the "great contribution" of the Soviets to the recent study of Antarctica, during which more was learned in 3 or 4 years than in the many decades before the IGY, and (4) the early and continued economic and scientific activity undertaken by the Slava.

66. The Soviets now picture themselves as an integral part of whatever type of mutual control is established to insure observation of the Antarctic Treaty provisions. More than this, however, the Soviets are now using the Treaty in their peace and disarmament campaign as a model for the extension of the "peace zone" into the Pacific area and the Far East. This, it is claimed, would bring peace and security from nuclear warfare to the area of Australia and New Zealand, where unpleasant conflicts are currently whipped up by US militarists with the help of SEATO." The Treaty is also described as a good beginning to a relaxation of tensions -- as if it resulted from Khrushchev's peaceful mission to the US and the birth of the spirit of Camp David. Khrushchev even sent personal New Year greetings to all Antarctic scientists, in which he underscored the importance of cooperation "for the good of all mankind."

67. Recently, Tolstikov, a leading Soviet polar scientist, while speaking about the Antarctic Treaty, called on "scientists of all countries to pool their efforts in the struggle for peace and universal disarmament".

What may be even more significant are his assertion that all work done by the Soviets in the Arctic as well as the Antarctic -- including the use of the atomic ice-breaker Lenin -- is in the cause of peace. This may be another contribution to the effort to create an impression that all Soviet activities -- even the Pacific missile tests -- are for peaceful purposes only. It is not inconceivable that the USSR may be laying the groundwork for an eventual proposal to land and recover an instrumented nose cone in Antarctica as a peaceful scientific project.

68. Other possible Soviet political exploitation of Antarctica may be suggested in a recent press article by M. M. Somov, prominent in the planning and administration of Soviet Antarctic operations. He noted that trans-Antarctic airlines and permanent airfields are under discussions. It is not certain whether this implies Soviet intentions or merely reflects not infrequent references to Antarctic air transport in the US press. Recent disclosure of plans to introduce heavy turbo-jet aircraft into Antarctica gave no indications on whether the aircraft is to be delivered by ship or whether the Soviets may attempt a dramatic non-stop flight and hail it as a precursor of future operations. Somov further noted that future society, "living under a planned economy and producing an abundance of food," could use Antarctica as a gigantic refrigerator thus echoing the well-known American "deep freeze" concept. Whether the Soviets intend to capitalize on this concept by making the first move in that direction is still uncertain.